



Fig. 1a

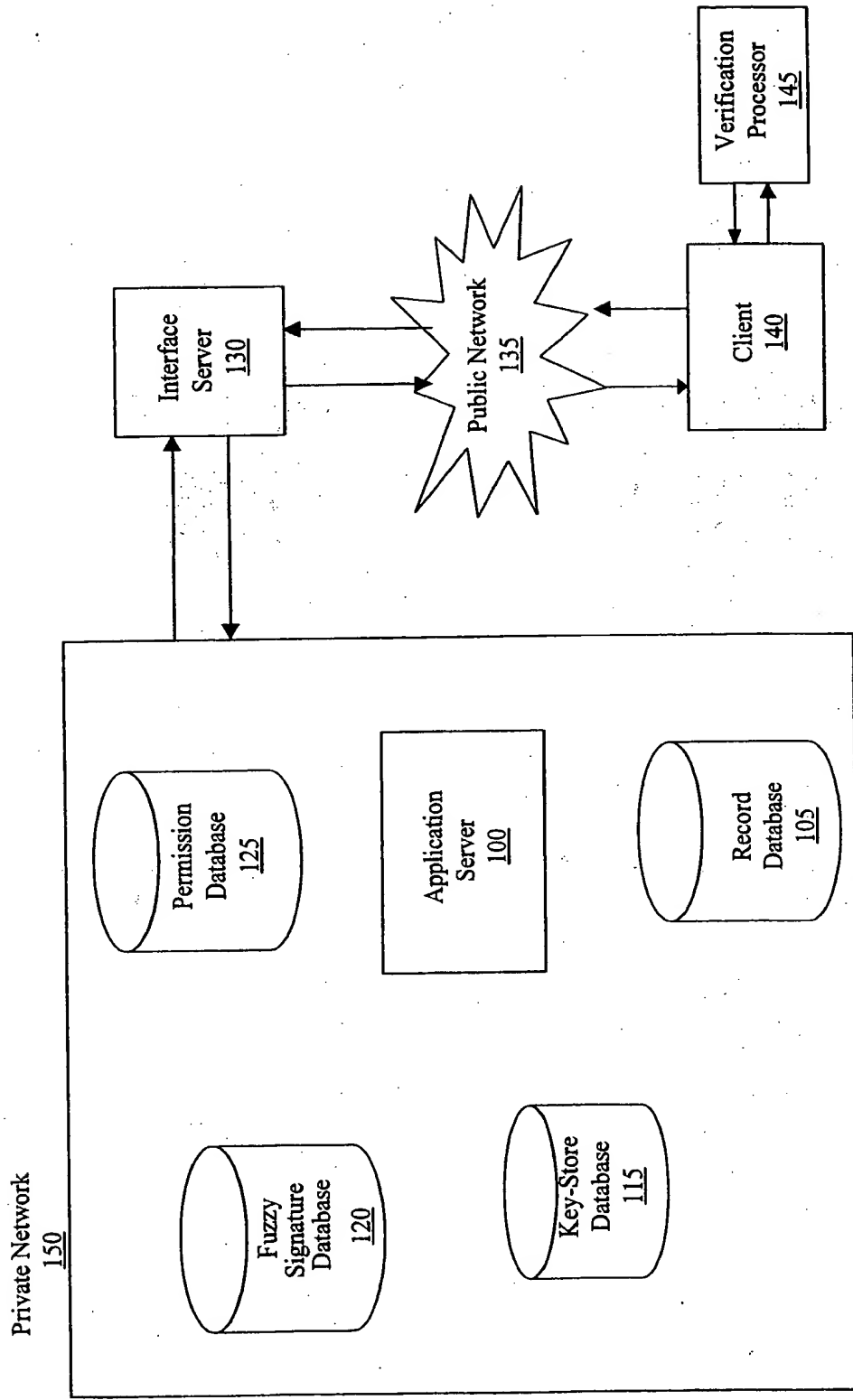
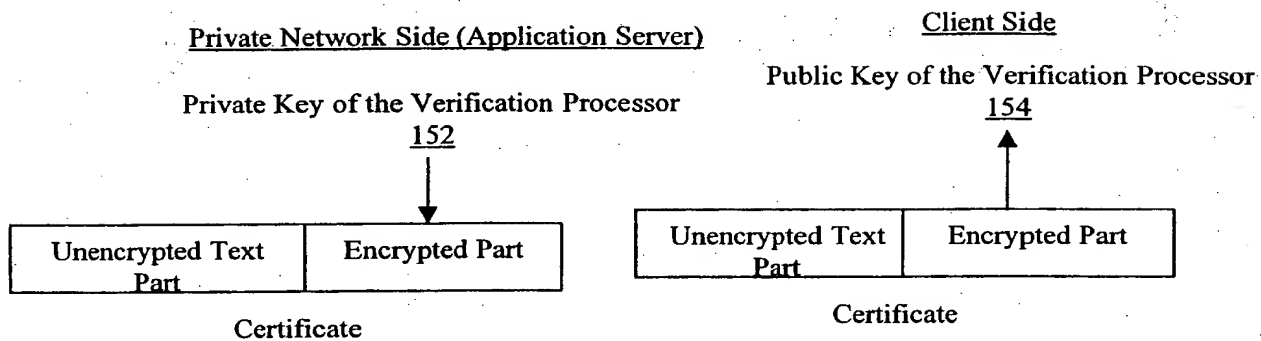




Fig. 1b

Keys Used for Authenticating the  
Interface Server



Key:    ↓ = Encryption    ↑ = Decryption



Fig. 1c

Keys Used in Transmitting, Receiving,  
and Storing Data

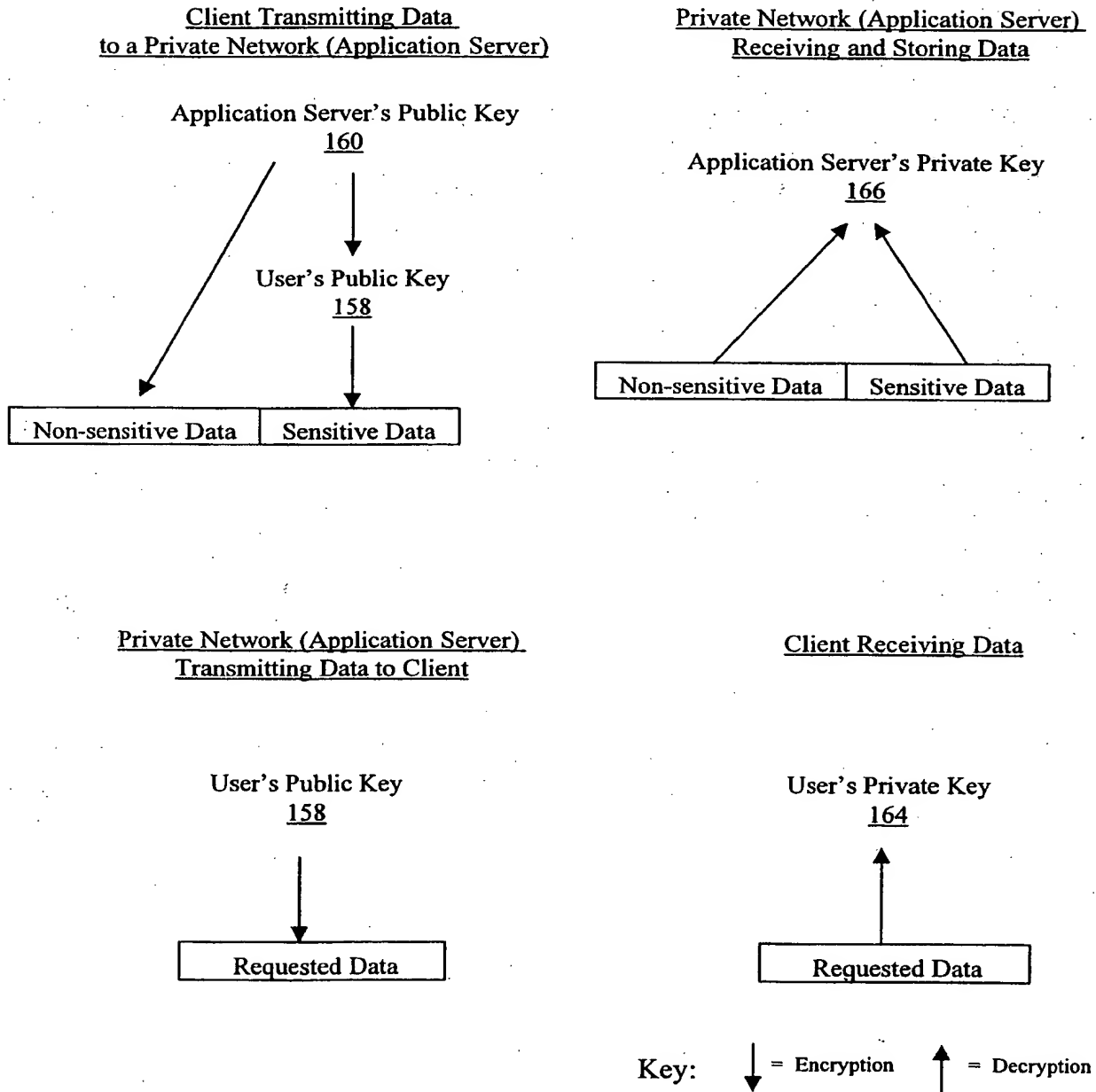
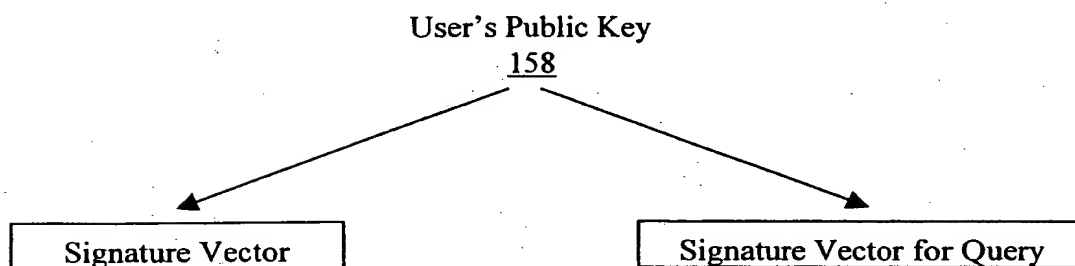




Fig. 1d

Keys Utilized in Fuzzy Searching

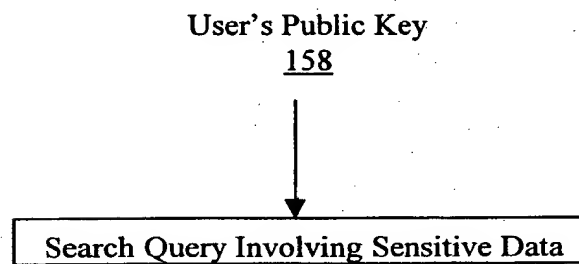


Key:    ↓ = Encryption    ↑ = Decryption



Fig. 1e

Keys Utilized in Relational Database Searching



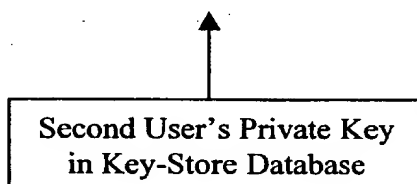
Key: ↓ = Encryption    ↑ = Decryption



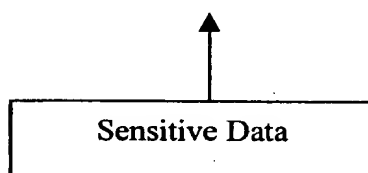
Fig. 1f

Keys Utilized in Accessing Sensitive Data

First User's Key-Store Master Key  
168



Second User's Private Key  
164



Key:    ↓ = Encryption    ↑ = Decryption



Fig. 1h

Steps for Communications between a Client and a Private Network

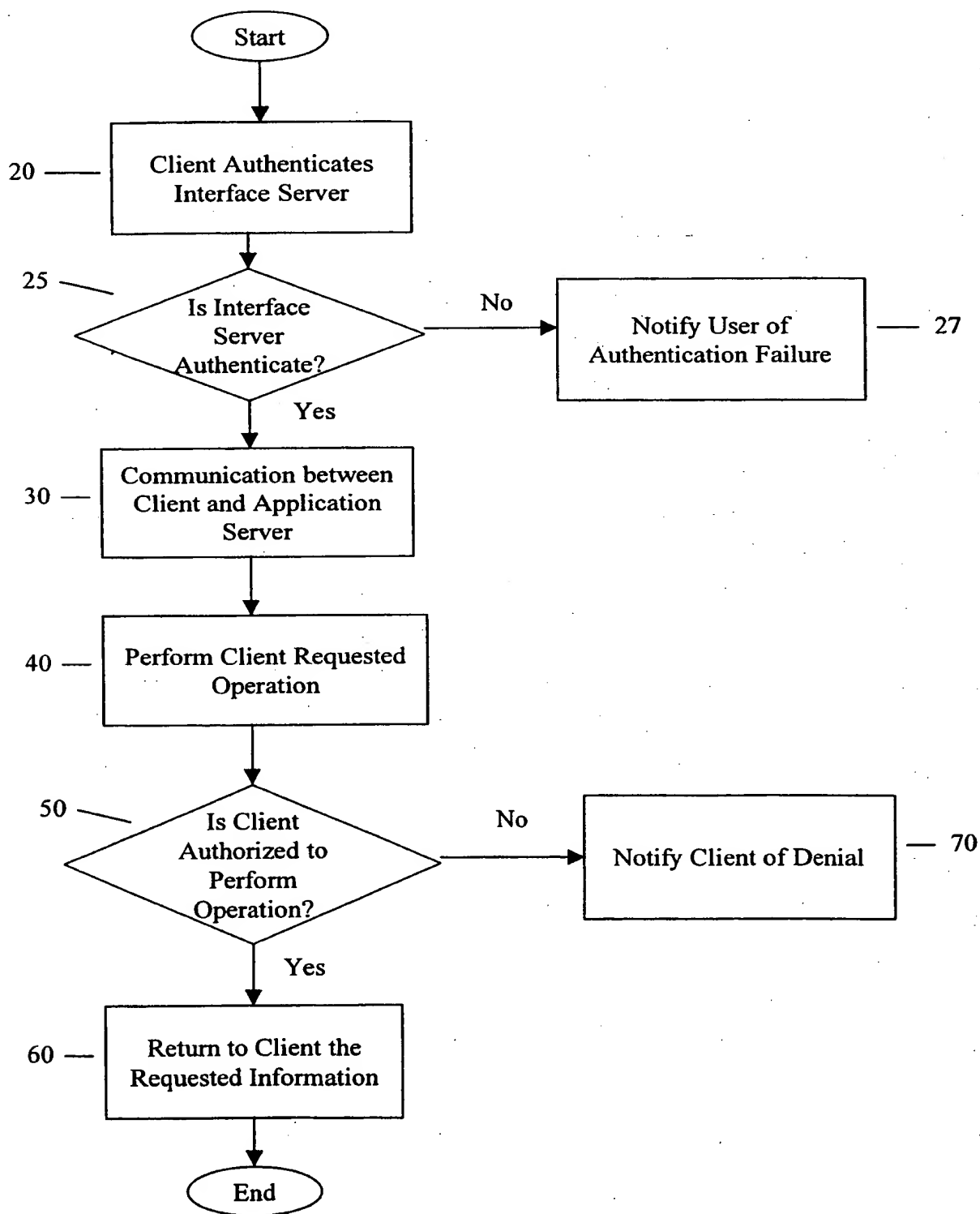




Fig. 2

Authentication

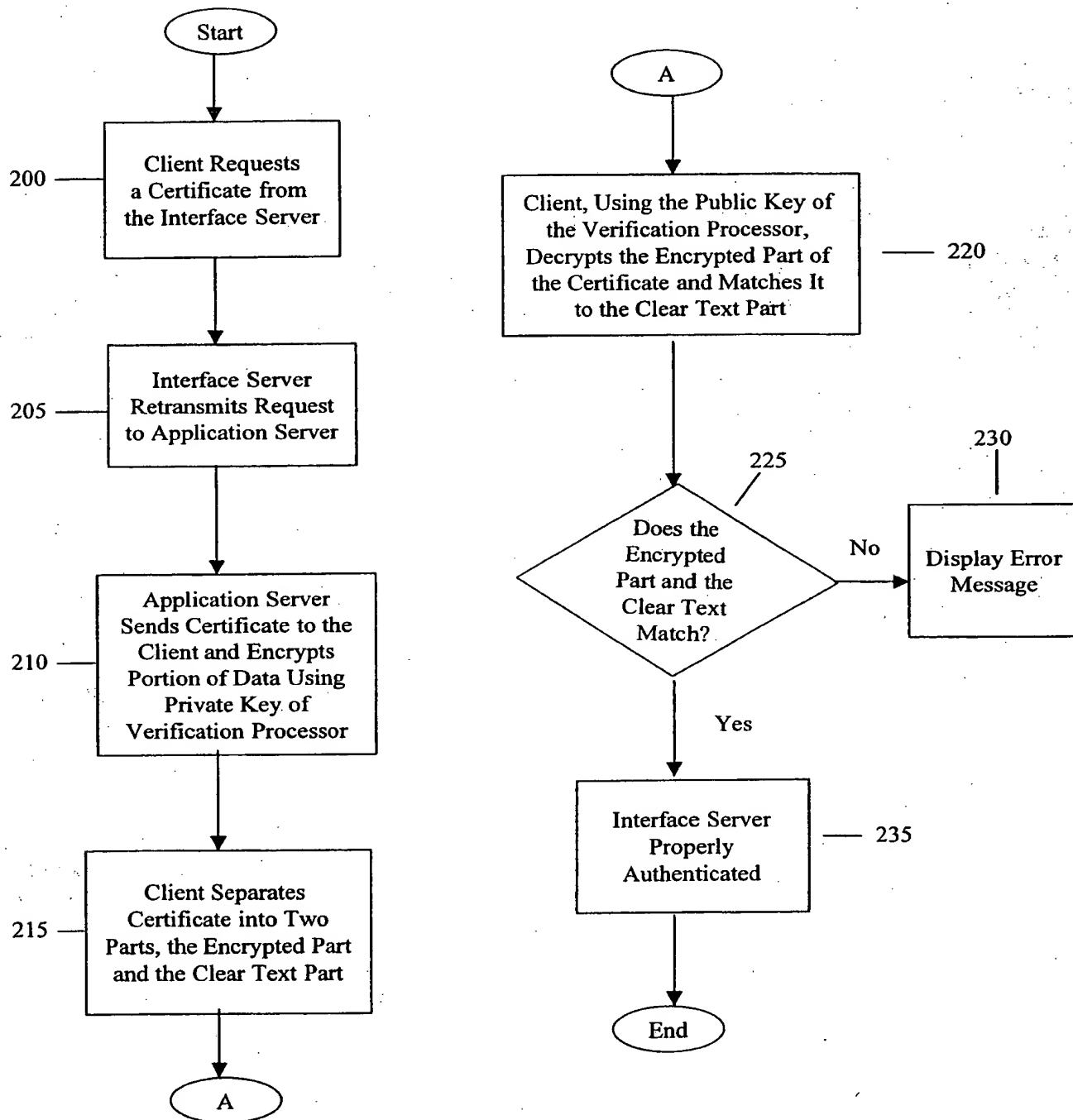






Fig. 3

Transmission and Storage of Data

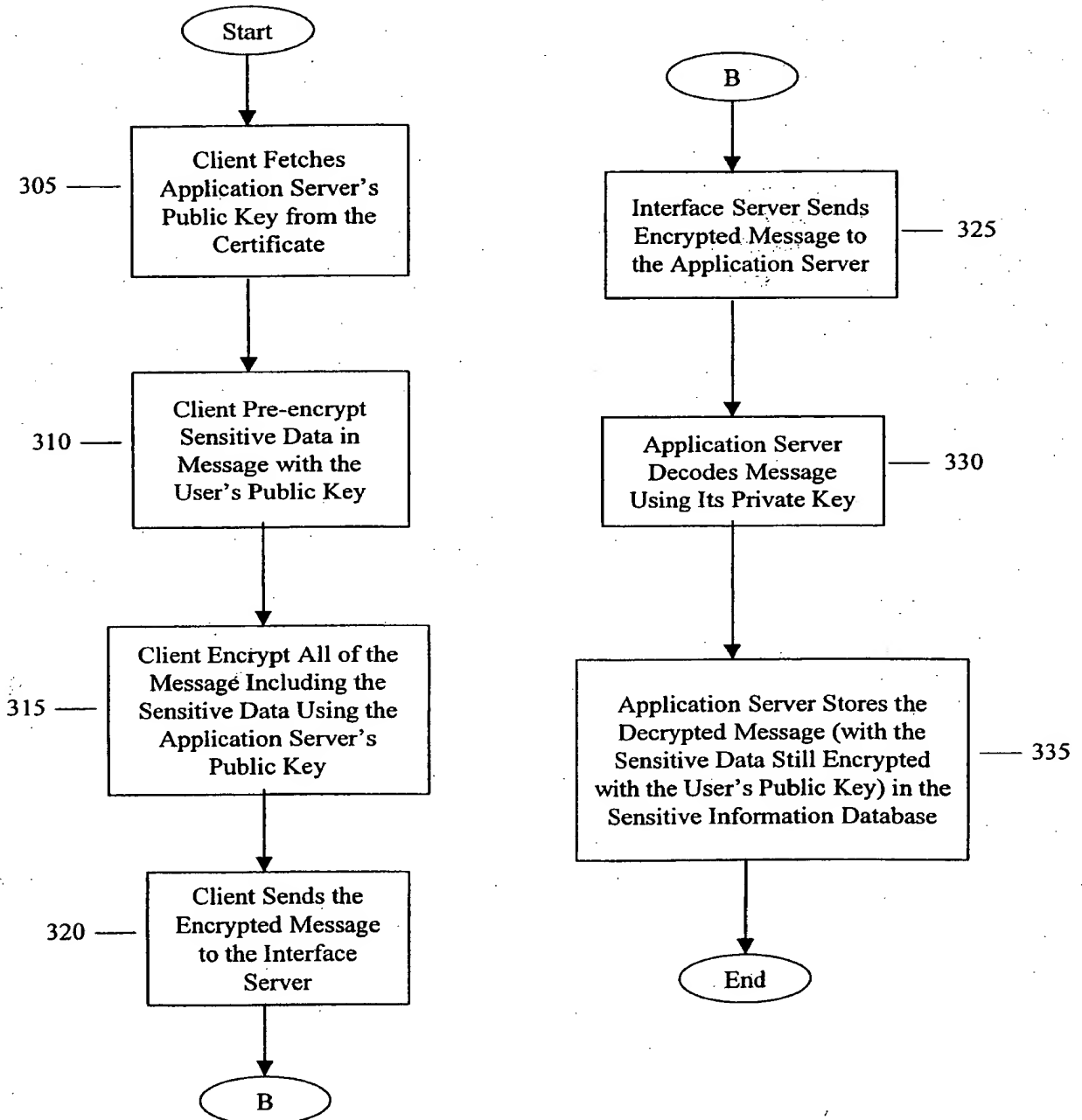




Fig. 4

Search Operation

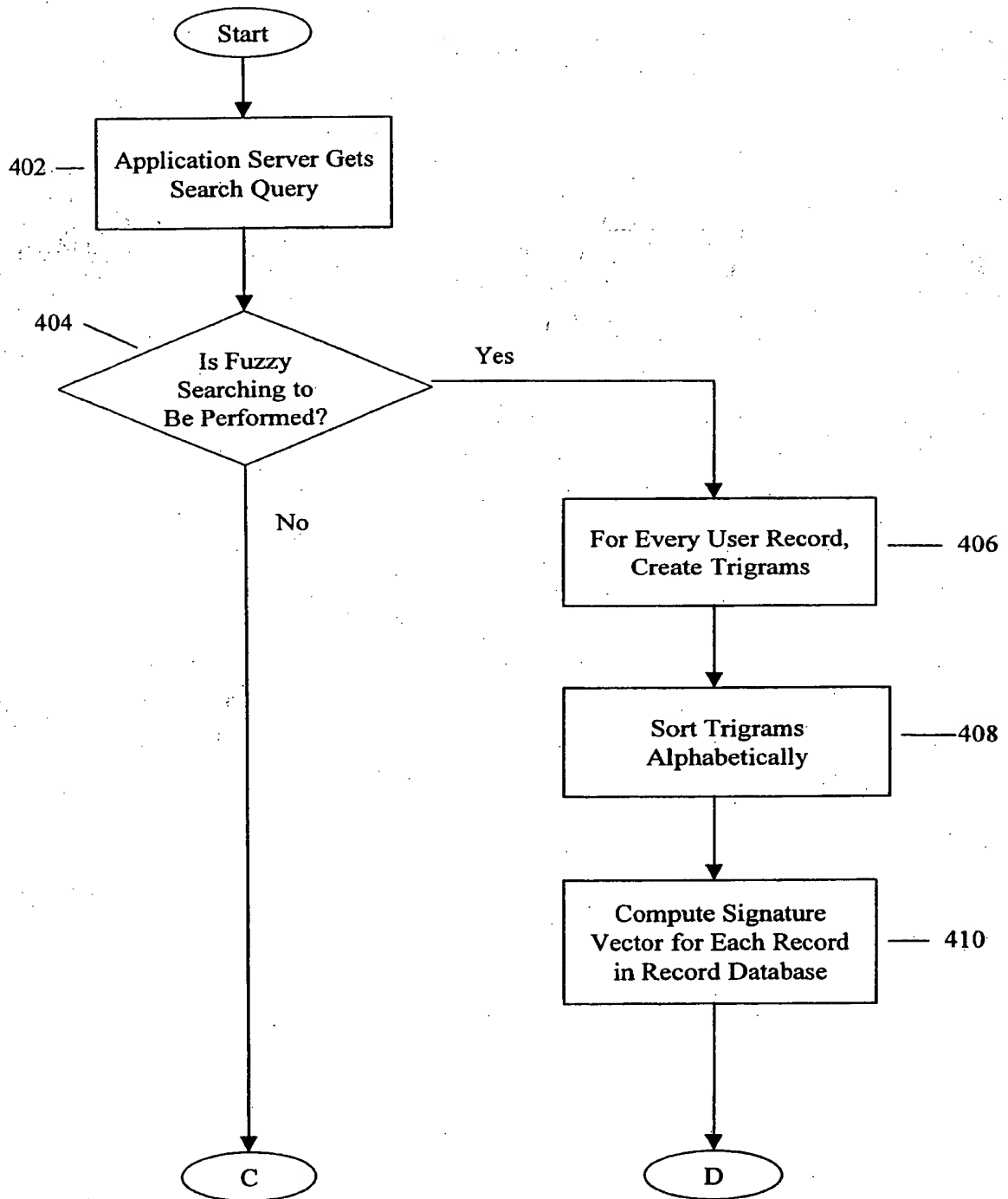
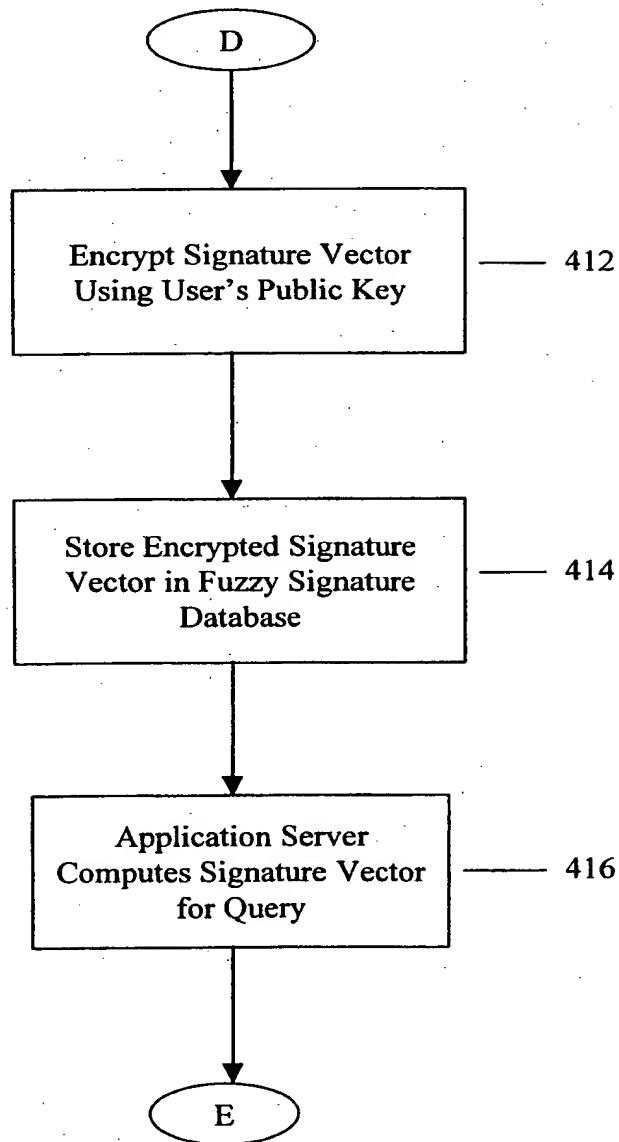




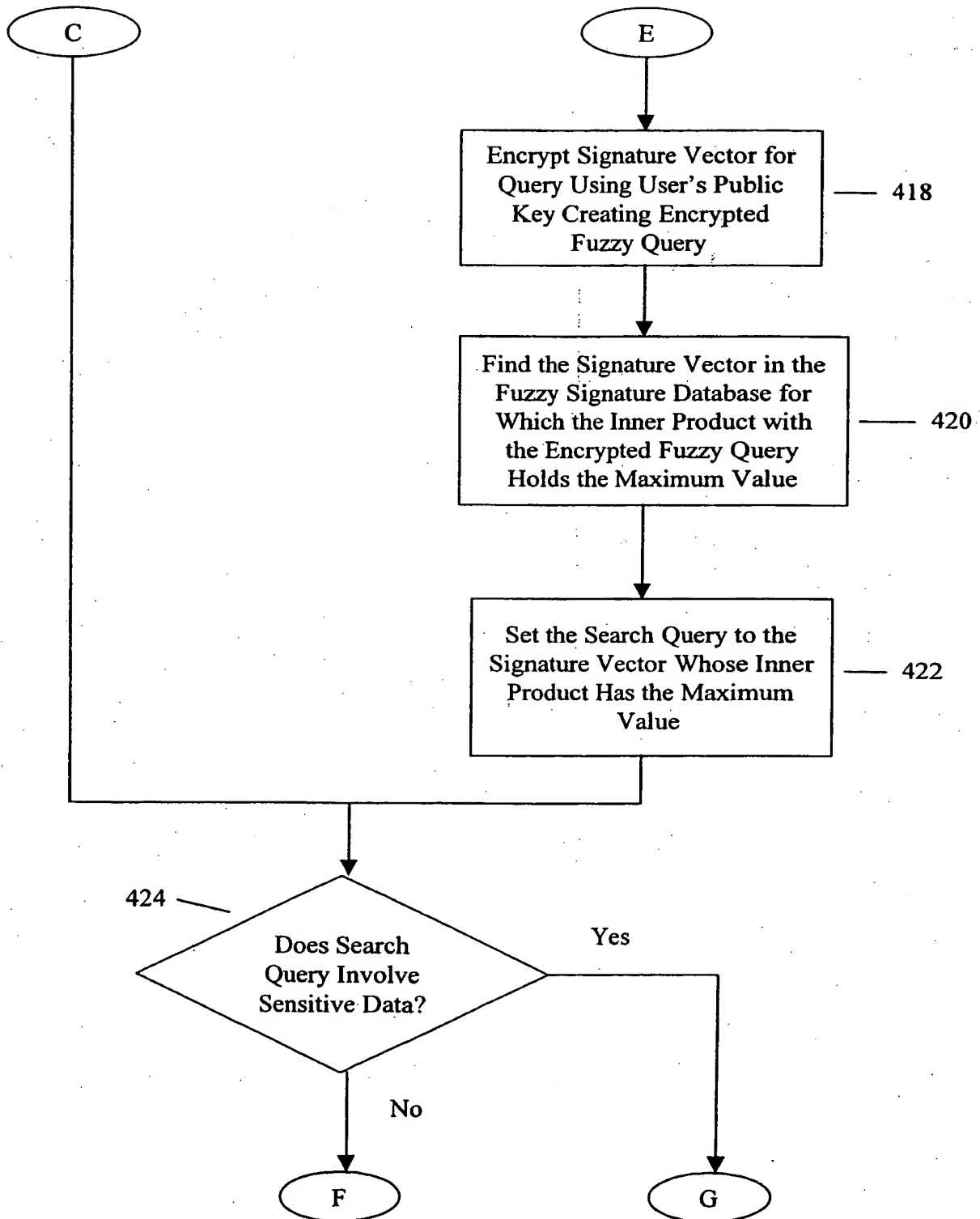
Fig. 4

Search Operation



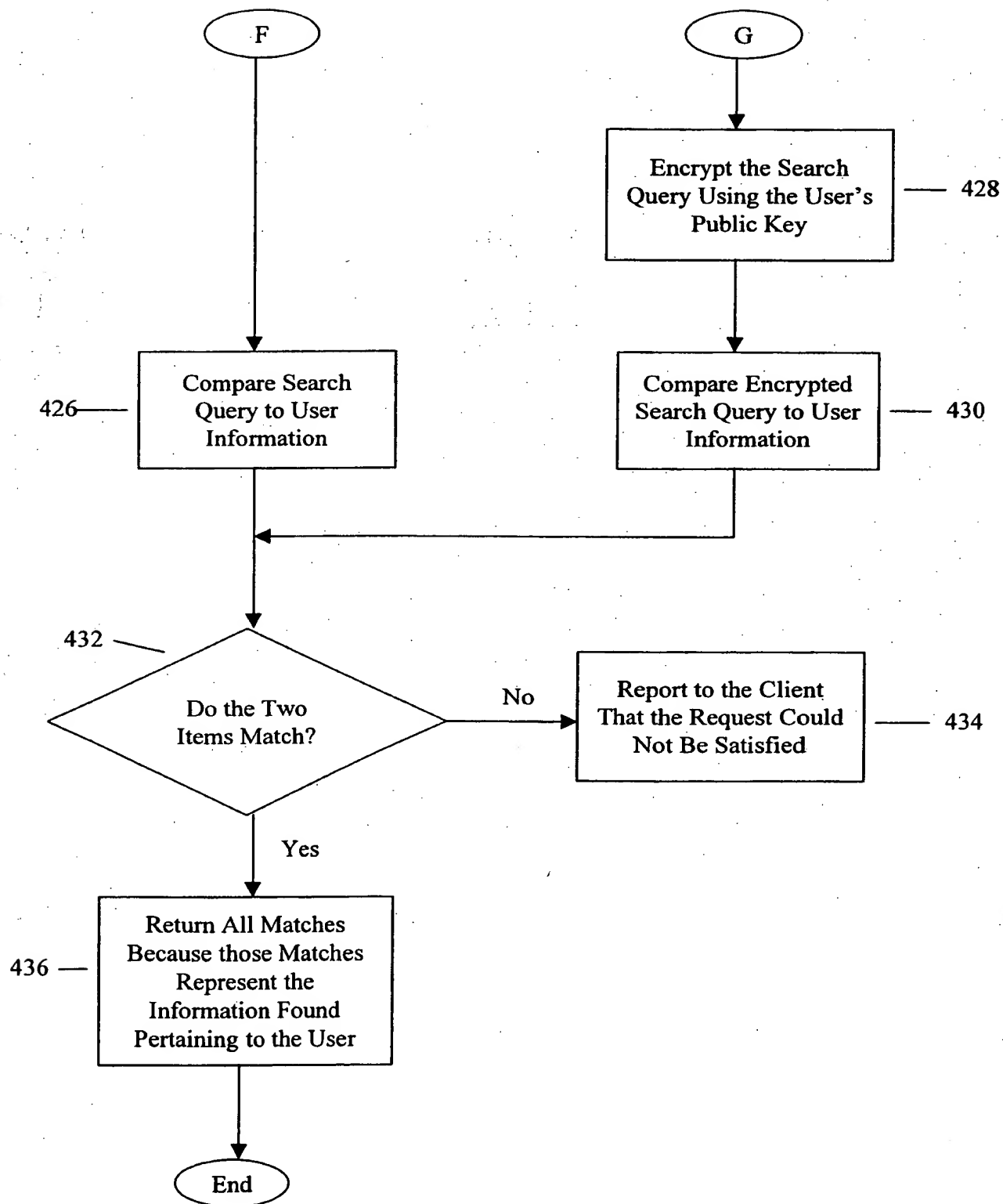


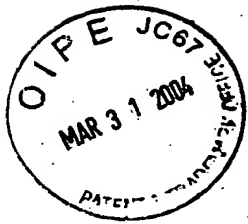
**Fig. 4**  
**Search Operation**





**Fig. 4**  
**Search Operation**





**Fig. 5**  
**Accessing Sensitive Data**

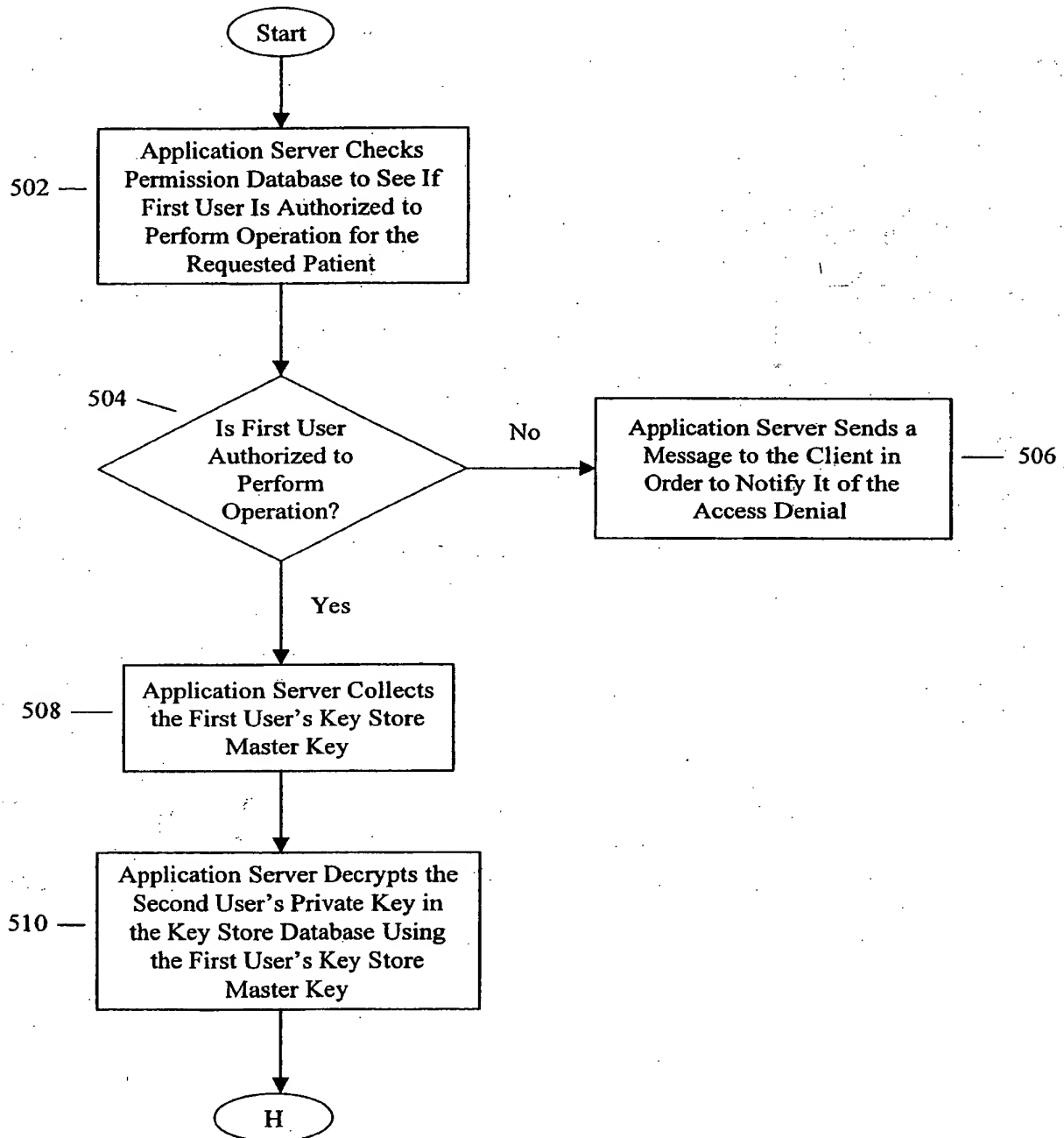




Fig. 5

Accessing Sensitive Data (Cont.)

